Remarks

Favorable reconsideration of this application is requested in view of the following remarks. For the reasons set forth below, Applicant respectfully submits that the claimed invention is allowable over the cited references.

The non-final Office Action dated December 24, 2003, indicated that claims 1, 7, and 9 stand rejected under 35 U.S.C. 103(a) as being unpatentable over *Berthoumieux et al.* (European Patent 0 447 302 (English translation)); claims 2-4 stand rejected under 35 U.S.C. 103(a) as being unpatentable over *Wang* (U.S. Patent No. 5,912,644) in view of the '302 reference; claim 5 stands rejected under 35 U.S.C. 103(a) as being unpatentable over the '644 reference in view of the '302 reference and further in view of *Krasner* (U.S. Patent No. 5,841,396); claim 6 stands rejected under 35 U.S.C. 103(a) as being unpatentable over the '302 reference in view of the '396 reference; claims 8 and 10 stand rejected under 35 U.S.C. 103(a) as being unpatentable over the '302 reference in view of *Cidon et al.* (U.S. Patent No. 4,991,772); and claims 11-28 stand rejected under 35 U.S.C. 103(a) as being unpatentable over the '644 reference in view of the '302 reference and the '396 reference.

Applicant respectfully traverses the Section 103(a) rejections of all of the claims because the Office Action failed to establish a *prima facie* case of obviousness. To establish a *prima facie* case of obviousness, basic criteria including the following must be met, as indicated in the M.P.E.P. First, the prior art reference (or references when combined) must teach or suggest all of the claim limitations. In addition, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the primary reference or to combine reference teachings. In this instance, the Office Action failed to meet all of the criteria for establishing the Section 103(a) rejections, as discussed below.

The phraseology of Claim 1 has been amended to remove the word "system," added by previous amendment, in a manner that is consistent with the Specification, that does not narrow the claim and that is not for reasons of patentability.

Applicant submits that the rejections of claims 1 and 6-10, which rely upon the '302 reference as a primary reference, fail to show all of the limitations in the rejected claims. For example, the rejection fails to show correspondence between the primary '302 reference and limitations including clocking digital signal processing circuitry to

permit digital signal processing during a second shorter time interval (relevant to a first interval) in the manner claimed in the present invention. As acknowledged on page 4 of the Office Action, the '302 reference does not show "that the second timer interval [with digital circuitry] is shorter than the first time interval [with analog circuitry]." The rejection goes on to allege, without citing any supporting evidence, that this second timer interval would be recognized as being shorter because "the speed of the clocks of the digital circuitry is significantly faster than the speed of the clocks of the analog circuitry." Applicant submits that this allegation fails to show how such a faster clock speed would necessarily (inherently) imply a shorter time interval for the processing (not merely the clocking) at the digital circuitry. In order to establish inherency, the extrinsic evidence "must make clear that the missing descriptive matter *is necessarily present in the thing described in the reference*, and that it would be so recognized by persons of ordinary skill." *Continental Can Co. v. Monsanto Co.*, 948 F.2d 1264, 1268, 20 U.S.P.Q.2d 1746, 1749 (Fed. Cir. 1991) (emphasis added). "Inherency, however, may not be established by probabilities or possibilities. The mere fact that a certain thing may result from a given set of circumstances is not sufficient." *Id.* at 1269, 20 U.S.P.Q.2d at 1749 (quoting *In re Oelrich*, 666 F.2d 578, 581, 212 U.S.P.Q. 323, 326 (C.C.P.A. 1981).

In this instance, the rejection failed to show how the asserted second time interval is necessarily shorter than the first time interval with the '302 reference. Specifically, the rationale stated in the rejection is flawed in making the assumption that "since the data throughput for the digital circuitry exceeds the data throughput for the analog circuitry ... the digital circuitry needs less time to process the received data." Applicant submits that, while digital circuitry may or may not clock faster than analog circuitry, the rejection fails to show how the clocking of the circuitry is relevant to the time interval and accordingly fails to show how a faster clock necessarily means a shorter time interval. In the present invention, certain claimed limitations are directed to analog circuitry that captures information data during a first interval, and digital signal processing circuitry that process the captured information data during a second interval. The rejection fails to show any clock-speed dependent relationship between the information capture time interval with the analog circuitry and the processing time interval with the digital signal processing circuitry. It is clearly likely that digital signal processing circuitry may clock

at a slower rate than analog circuitry. Moreover, the speed at which a particular circuit operates are not necessarily in direct correspondence to a clock speed. For example, certain circuits may exhibit time intervals that are slower than a particular clock used to clock the circuits. In this regard, the rejections relying upon these failed teachings of '302 reference do not meet the requirements for establishing a *prima facie* Section 103 rejection and the rejection should therefore be removed.

Applicant further submits that the rejections of claims 2-5 and 11-28, which rely upon the '644 reference as a primary reference, fail to show a combination of references that teaches all of the claimed limitations in the context of the claimed invention. For example, the rejection as stated on page 5 of the Office Action (and restated on pages 9-10) apparently attempts to correlate signal transmission times with corresponding analog and digital processing times. It is unclear as to how the Examiner is asserting that the guard time 19 of the '644 reference would involve any digital signal processing of the received signal. Specifically, the Examiner failed to show how the '644 reference could be modified to work in this manner, or to show any likelihood of success in operating the '644 reference in this manner. The referenced "guard time 19" shown in FIG. 2 is discussed in connection with a signal transmission between initiation and response stations as shown in FIG. 1. The Examiner's attempt to apply this transmission time frame information with the apparatus shown in FIG. 7 is incomplete (and thus also inconsistent with the requirements of 35 U.S.C. §132). Applicant is unsure as to how the Examiner is suggesting the time intervals shown in FIG. 2 would apply to the transceiver apparatus shown in FIG. 7. Therefore, the Section 103 rejections based on the primary '644 reference fail to teach or suggest all of the claimed limitations, and the rejection should be removed.

Moreover, in reviewing the '644 reference, Applicant cannot ascertain how the cited "digital circuitry 90" in FIG. 7 would operate during the "guard interval 19." For instance, it appears at columns 20 and 21 that the spread spectrum transceiver 100 of FIG. 7 operates in receive or transmit modes (*i.e.*, as represented by frames 18 and 20) using both the RF section 89 and the correlator section 90. In this regard, the correlator section 90 does not appear to operate in a reduced-activity mode during either of these

frames. Rather, it appears that the correlator section 90 indeed operates during both of these frames.

Modifying the correlator section 90 so that it does not operate during these frames, as the Examiner suggests, is inconsistent with and contrary to the teachings in the '644 reference. This purported modification would further act to undermine the '644 reference's purpose of performing transmission and receiving functions during frames (*e.g.*, 18 and 20) separated by a guard time (*e.g.*, 19) to facilitate hardware switching between transmit and receive mode and of a frequency channel. *See, e.g.*, column 13, lines 2-10. This purpose facilitates the elimination of "self-interference from the spread-spectrum transmitter ... into the receiver of the same station or mobile apparatus." *See, e.g.*, column 13 lines 16-20. Moving receiving and transmitting functions (of the correlator section 90) into the guard time would undermine this purpose by reducing and/or removing the transmission and receiving processing buffer facilitated by the guard time. Where such a modification would render the primary reference unsatisfactory for its intended purpose, there is no motivation to make the modification. *See, e.g.*, *In re Gordon*, 733 F.2d 900, 221 U.S.P.Q. 1125 (Fed. Cir. 1984) (A §103 rejection cannot be maintained when the asserted modification undermines purpose of main reference.). Therefore, the Section 103 rejections relying upon the modification of the '644 reference in this manner should also be reversed because the modification would be unmotivated.

Regarding all of the Section 103 rejections, the Office Action further failed to cite evidence of motivation for modifying the primary '302 reference. As discussed above and pointed out twice in previous responses, the M.P.E.P. and relevant case law make clear a requirement for a showing of evidence that supports any suggested modification of a primary reference when asserting a Section 103 rejection. The Examiner's Response to Arguments on page 3 of the Office Action failed to address this issue as identified in the previous response (and thus the Examiner has further failed to comply with M.P.E.P.§707.07(f)). While obviousness can be established, as the Examiner has pointed out, by combining or modifying the teachings of the prior art, the Examiner must further show some evidence of motivation for making the combination. *See, e.g.*, *Ruiz v. A.B. Chance Co.*, 234 F.3 654 (December 6, 2000). The Examiner's broad assertion that the motivation "is found in either the references themselves, or in the knowledge generally

available to one of ordinary skill in the art" fails to specifically cite any such evidence and therefore fails to meet the requirements of a Section 103 rejection. For example, on page 4 of the Office Action, the rejection of claim 1 over the '302 reference asserts that "one of ordinary skill in the art would recognize that the data throughput of the digital circuitry is faster than the data throughput of the analog circuitry in accordance with the difference in their relative clock speeds." This assertion fails to show any supporting evidence showing such a correlation between clock speed and data throughput with the specific applications to which the elements are directed; rather, the assertion is made using a hindsight interpretation of the '302 reference in view of the claimed limitations.

Furthermore, regarding the Section 103 rejections based on the '644 reference, the Office Action has failed to cite any supporting evidence for making the asserted modification that would involve processing received signals at the asserted "digital circuitry 90" during the guard time 19. While the Examiner has referenced a problem with the secondary '302 reference with magnetic disturbances, there is no cited evidence suggesting such a problem with the '644 reference. Moreover, there is no cited evidence that supports modifying the digital circuitry 90 such that is operates during the guard time 19, or any evidence that suggests that the invention in the '644 reference would operate under such conditions. Each of the Section 103 rejections based on the primary '644 reference rely upon this unsupported modification and are accordingly improper.

In view of the above, Applicant submits that all of the Section 103 rejections further fail to meet the motivation requirement for establishing a *prima facie* case of obviousness. Accordingly, the Section 103 rejections should be removed.

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In view of the remarks above, Applicant believes that each of the rejections has been overcome and the application is in condition for allowance.

Should there be any remaining issues that could be readily addressed over the telephone, the Examiner is encouraged to contact the undersigned at (651) 686-6633.

Respectfully submitted,

CRAWFORD MAUNU PLLC
1270 Northland Drive, Suite 390
St. Paul, MN 55120
651/686-6633

By: _____
Robert J. Crawford
Reg. No. 32,122